IP Link® Device Interface Communication Sheet

This document provides additional assistance with wiring your Extron IP Link enabled product to your device. Different components may require a different wiring scheme than those listed below.

For complete operating instructions, refer to the user's manual for the specific Extron IP Link enabled product or the controlled device manufacturer supplied documentation.

Device Specifications:

Device Type:	Display
Manufacturer:	Samsung
Firmware Version:	N/A
Model(s):	320MP-2, LH40MGQLBF, LH65MGPLBF, P42H-2, P42HP, P50FP, P50HP, P63FP, SyncMaster 320MX, SyncMaster 320MX-2, SyncMaster 320MXN, SyncMaster 320MXN-2, SyncMaster 400FP-2, SyncMaster 400MP, SyncMaster 400MX, SyncMaster 400MX-2, SyncMaster 400MXN, SyncMaster 460FP-2, SyncMaster 460MX, SyncMaster 460MX-2, SyncMaster 460MXN, SyncMaster 460MXn-2, SyncMaster 520DX, SyncMaster 520DXN-2, SyncMaster 650FP, SyncMaster 650FP-2, SyncMaster 650MP, SyncMaster 650MP-2

Version History:

Driver Version	Date	IP Link Compiler	GC Version	Notes
17	10/8/2012	1.5.1	3.3.2	Extron Certified. Fixed power & volume status. Tested on SyncMaster 650FP-2.
16	3/7/2012	1.5.1	3.3.1	Added Model SyncMaster 650MP-2
15	8/31/2011	1.4.0	3.2.0	Added model SyncMaster 650FP-2.
14	6/3/2011	1.4.0	3.1.1	Added models SyncMaster 320MX-2 and SyncMaster 320MXN-2.
13	2/1/2011	1.4.0	3.0.4	Added Models LH40MGQLBF, LH65MGPLBF, SyncMaster 650FP, and SyncMaster 650MP
12	11/3/2010	1.40	3.0.4	Added Model P42H-2.
11	10/21/2010	1.40	3.0.4	Added Model SyncMaster 520DXN-2
10	9/24/2010	1.4.0	3.0.3	Added Channel Step Control.
9	9/8/2010	1.4.0	3.0.3	Added models SyncMaster 460MXn-2, SyncMaster 460MX-2

8	08/05/2010	1.4.0	3.0.3	Added Channel Control.
7	02/24/2010	1.4.0	3.0.2	Added Signal Status.
6	02/22/2010	1.4.0	3.0.2	Added Volume control for the MLC62 driver.
5	09/25/2009	1.4.0	3.0.1	Added models 320MP-2, SyncMaster 400FP-2, and SyncMaster 460FP-2.
4	09/10/2009	1.4.0	3.0.1	Added model SyncMaster 400MX-2.
2	03/23/2009	1.3.11.1	2.5.0	Updated volume command. Added support for SyncMaster 400MP, P50HP, P42HP, P50FP, and P63FP.
1	02/12/2009	1.3.11.1	2.5.0	Initial version.

Driver Notes:

- Device ID needs to be set to 01.
- Driver is not recommended with pass-through mode.
- Channel & Volume optimized.
- Tuner functions not available on all supported models.

Control Commands & States:

Aspect Ratio (Computer)	4:3	16:9	
Aspect Ratio (Video)	Wide 16:9	Zoom 1 4:3	Zoom 2
Audio Mute	On	Off	
Auto Image	Execute		
Channel[2]	0 – 9 Enter	.	Clear
Channel TV (Step)[2]	Up	Down	
Executive Mode[1]	Mode 1	Mode 2	Off
Input	PC AV MagicNet[5] HDMI	BNC S-Video[5] RF[2,5] DVI (HDCP)	DVI Component DTV[5]
IR Remote	Enable	Disable	
On Screen Display	On	Off	
Picture In Picture	On	Off	
PIP Input	PC S-Video	DVI Component	AV
PIP Position	Upper Left Lower Right	Upper Right	Lower Left
PIP Size	Large Double 2	Small Double 3	Double 1
PIP Swap	Execute		
Power Control	On	Off	

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Signal Select[2,3]	Analog	Digital
Tuner Mode[2,4]	Air	Cable
Volume (Discrete)	0 to 100 in steps of 1	

1. Mode 1 locks IR remote and front panel controls. Mode 2 locks only front panel controls.
2. Only valid on models with a tuner.
3. Signal Select is defaulted to Digital
4. Tuner Mode is defaulted to Cable.
5. Not available on all models.

Channel Control:

Channel, Signal Select and tuner Mode are all part of the channel selection. If using in a macro you will need to put a 1 second delay between these commands.

If the channel you desire is 12 on a Analog signal and off Cable then:

- Select Analog under Signal Select
- Select Cable under Tuner Mode
- Select 1 then 2
- Select Enter.

If the channel you desire is 12.15 on a Digital signal and off the Air then:

- Select Digital under Signal Select
- Select Air under Tuner Mode
- Select 1 then 2
- Select '.'
- Select 1 then 5
- Select Enter.

Status Available:

Aspect Ratio (Computer)	4:3	16:9	
Aspect Ratio (Video)	Wide	Zoom 1	Zoom 2
	16:9	4:3	
Audio Mute	On	Off	
Connection Status	Connected	Disconnected	
Executive Mode[1]	Mode 1	Mode 2	Off
Input	PC	BNC	DVI
	AV	S-Video[5]	Component
	MagicNet[5]	RF[5]	DTV[5]
	HDMI	DVI (HDCP)	
IR Remote	Enable	Disable	
Major Channel[3]	Value		
Minor Channel[3]	Value		
On Screen Display	On	Off	
Picture In Picture	On	Off	
PIP Input	PC	DVI	AV
	S-Video	Component	
PIP Size	Large	Small	Double 1
	Double 2	Double 3	
Power Control	On	Off	
Signal Select3	Analog	Digital	
Signal Status[2,3]	Active	Inactive	Status Unavailable
Tuner Mode[2,3]	Air	Cable	
Volume (Discrete)	0 to 100 in steps of 1		

1. Mode 1 locks IR remote and front panel controls. Mode 2 locks only front panel controls.
2. Not true status, used for indication.
3. Only available on models with tuner.

MLC62 Supported Commands:

Aspect Ratio (Computer)	4:3	16:9	
Aspect Ratio (Video)	Wide	Zoom 1	Zoom 2
	16:9	4:3	
Audio Mute	On	Off	
Auto Image	Execute		
Channel[2]	0 – 9	Enter	Clear
Channel TV (Step)[2]	Up	Down	
Executive Mode[1]	Mode 1	Mode 2	Off
Input	PC	BNC	DVI
	AV	S-Video[3]	Component
	MagicNet[3]	RF[3]	DTV[3]
	HDMI	DVI (HDCP)	
IR Remote	Enable	Disable	
On Screen Display	On	Off	
Picture In Picture	On	Off	
PIP Input	PC	DVI	AV
	S-Video	Component	
PIP Position	Upper Left	Upper Right	Lower Left
	Lower Right		
PIP Size	Large	Small	Double 1
	Double 2	Double 3	
PIP Swap	Execute		
Power Control	On	Off	
Signal Select[2]	Analog	Digital	
Tuner Mode[2]	Air	Cable	
Volume (Discrete)	0 to 100 in steps of 1		

1. Mode 1 locks IR remote and front panel controls. Mode 2 locks only front panel controls.
2. Only available on models with tuner.
3. Not available on all models.

Cable and Adapter Requirements:

F/F RS-232 Straight Serial Cable

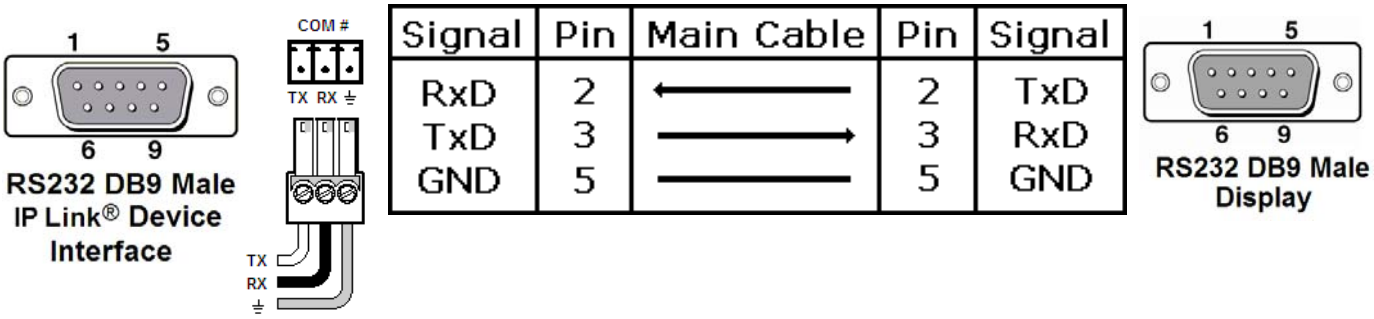
Notes for the Device:

- The "Power Save" feature of the display needs to be disabled in order for the driver to work properly. There are no driver controls available for the Power Save feature.
- If the main input is a high resolution input (i.e. PC), the PIP input cannot also be a high resolution input and vice versa.
- Auto Image is only available for PC and BNC inputs.

Serial communication:

Port Type:	RS-232	**Parity:**	None
Baud Rate:	9600	**Stop Bits:**	1
Data Bits:	8	**Flow Control:**	None

Pin Assignments Diagram:



Note: Captive screw connector may also be used as a serial connection.

General Notes: